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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,033	02/09/2004	Lee Watts	67341-1985; 03MRA0135	6920
76799 7590 06/30/2010				
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EXAMINER				
FOX, JOHN C				
ART UNIT		PAPER NUMBER		
3753				
MAIL DATE		DELIVERY MODE		
06/30/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/775,033

Applicant(s)

WATTS ET AL.

Examiner

John Fox

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9,11-17,19-22 and 24-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9,11-17,19-22 and 24-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: _____

Claims 2, 8, 10, 18, and 23 have been cancelled.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5, 9, 11-17, 26-29, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al (US 5,401,001).

Cook et al show a gas exhaust valve with a steel bearing 28 pressed into hole 52, a steel valve spindle 24 with a shoulder 24d, a plate 32, and ceramic washers 38, 40. Bellows 44 acts as a spring to bias washers 38, 40 into sealing engagement with opposite ends of the bearing. Washer 38 is read as being part of the valve spindle since shoulder 24D acts on it to work together to seal on the bearing. The steel spindle and bearing are read as being Werkstoff No. 1.4122 or 1.4104 in view of the high temperature steel components disclosed in Cook et al. As to claim 5, 62 is read as a nut integrally mounted on the shaft. As to claims 11 and 12, Cook et al shows two embodiments of the plate, the first is read as eccentric and the second in Figures 10-12 is read as concentric. As to claim 27, the bearing 28 is disclosed as pressed into the bore 52 and is thus read as not requiring the crimp, which is seen as redundant. Both the bearing 28 and the hole 52 are read as of a "generally" constant diameter since the majority of the bearing and hole, at the center section of the bearing, are of constant diameter.

Applicant's arguments filed April 26, 2010 have been fully considered but they are not persuasive. Applicant argues that shaft 24 and bearing 28 do not have direct contact. However, no language in the claims require the spindle to be a single piece or

precludes the spindle from being a plurality of elements. The claim recites that the spindle is rotatably mounted in the bearing sleeve. The shaft 24 of Cook et al is rotatably mounted in the bearing 28. Accordingly, the rejection is still seen to be proper and will be maintained.

Claims 11-12 are, in the alternative, rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al.

In the event that Cook et al does not disclose both an eccentric and a concentric plate, Cook et al does disclose at least one of them. The use of the other is considered an obvious matter of design choice in that applicant has admitted that Figure 3 and Figures 4-5 are not patentably distinct.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al in view of Fodor et al (US 5,496,142).

Cook et al show the claimed valve except for a spring washer. Fodor et al show an Inconel spring washer for high temperature applications. It would have been obvious at the time the invention was made for one of ordinary skill in the art to substitute the spring washer of Fodor et al for the diaphragm spring of Cook et al under the rationale set forth in *KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007)* that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness. In this case the predictable result of such a substitution is that the washers 38, 40 would be biased to seal against the bearing in the high temperature environment of the exhaust gas valve.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al in view of Ong et al (US 5,645,900).

Cook et al show the claimed valve except for ceramic coatings. Ong et al teach a ceramic coating for, inter alia, bearings and teach multiple coatings of titanium nitride on a metal substrate. It would have been obvious at the time the invention was made for one of ordinary skill in the art to used such a plurality of coatings on a metal substrate in place of the ceramic washers of Cook et al under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness. In this case the predictable result of such a substitution is washers that seal against the bearing.

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al in view of Bartz (US 1,911,787).

Cook et al shows the claimed valve except for the conical secondary sealing and bearing surfaces. Bartz shows a similar valve with an integral bearing 17 and a bushing 45, which is read as a seal, having a conical shape spring biased into a conical bearing surface, unlabeled, of the bearing, see Figure 3. It would have been obvious at the time the invention was made for one of ordinary skill in the art to have used such a conical sealing and bearing configuration as taught by Bartz with the valve of Cook et al to under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain

predictable results is an indication of obviousness. In this case the predictable result is a seal against the bearing.

Claims 1, 3-5, 11-16, 24-28, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kuramoto et al (US 4,231,341).

Thauer shows the claimed exhaust gas valve except for a washer with a secondary sealing surface cooperating with a secondary bearing surface, a press fit bearing, and a bearing completely surrounded by the housing.

Kuramoto et al teach a valve of the same configuration with a washer 20 with a surface cooperating with a bearing surface of bearing 12, see Figure 3, which washer surface is read as a sealing surface in view of the sealing of washer 20 disclosed in Figure 2. Bearing 12 is press-fit into the its bore, is completely surrounded by the housing, is of a uniform diameter with the uniform diameter of the bore, and requires no other means of attachment. Washer 20 in the embodiment of Figure 3 centers the valve shaft.

It would have been obvious at the time the invention was made for one of ordinary skill in the art to have used a washer such as 20 of Kuramoto et al in the valve of Thauer to similarly seal against the bearing thereof.

It would have been obvious at the time the invention was made for one of ordinary skill in the art to use a press fit bearing as taught by Kuramoto et al in the valve of Thauer under the rationale set forth in *KSR v. Teleflex*, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness. The disposition of such

bearing within the housing and in a uniform diameter bore is suggested by Kuramoto et al.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kuramoto et al as applied above, and further in view of Cook et al.

Thauer, as modified, teaches the claimed valve except for using steel. Cook et al show a similar valve which use steel. It would have been obvious at the time the invention was made for one of ordinary skill in the art to have used steel as taught by Cook et al in the valve of Thauer under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kuramoto et al as applied above and further in view of Fodor et al.

Thauer, as modified by Cook et al, show the claimed valve except for a spring washer. Fodor et al show an Inconel spring washer for high temperature applications. It would have been obvious at the time the invention was made for one of ordinary skill in the art to substitute the spring washer of Fodor et al for the spring of Thauer, as modified, under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness. In this case the predictable result of such a substitution is that the washers 38, 40 would be biased to seal against the bearing in the high temperature environment of the exhaust gas valve.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kuramoto et al as applied above and further in view of Ong et al.

Thauer, as modified, show the claimed valve except for ceramic coatings. Ong et al teach a ceramic coating for, inter alia, bearings and teach multiple coatings of titanium nitride on a metal substrate. It would have been obvious at the time the invention was made for one of ordinary skill in the art to used such a plurality of coatings with the bearings surfaces of Thauer, as modified, under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple substitution of one known element for another to obtain predictable results is an indication of obviousness. In this case the predictable result of such a substitution is a face that seals against the bearing.

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kuramoto et al as applied above and further in view of Hester et al (US 3,916,943).

Thauer, as modified, shows the claimed device except for the primary seal being disposed in the bore housing the bearing. Hester et al teach a rotary valve with a valve shaft, or primary, seal bearing on a structure which forms a bearing, where the primary seal is disposed in the bearing bore. It would have been obvious at the time the invention was made for one of ordinary skill in the art to similarly disposed the primary seal of Thauer, as modified, in the bearing bore under the rationale set forth in KSR v. Teleflex, U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1835 (2007) that the simple

substitution of one known element for another to obtain predictable results is an indication of obviousness. In this case the predictable result is an effective primary seal.

Applicant's arguments with respect to Thauer have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Monday-Saturday from 10am-6pm (Hoteling Program).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Fox/
Primary Examiner
Art Unit 3753